

Message

From: Denawa, Mai [Denawa.Mai@epa.gov]
Sent: 7/20/2020 5:30:50 PM
To: Logan, Paul [Logan.Paul@epa.gov]; Robinson, Valois [Robinson.Valois@epa.gov]
CC: Chin, Lucita [Chin.Lucita@epa.gov]
Subject: RE: gw impacts cea

Hi Paul, this sounds great. Thanks so much for the update. I'll flag the CEA section for now that there might be updates to this section in the CEA but I'll hold off on any edits there until further input is provided by Lucita, ORC management, and WD management. There are two RTCs related to the specificity regarding the impacts to the ore-bearing zone so I'll put placeholders there too for now until we hear from you and Valois on this so that we have consistency.

Thanks! Mai

From: Logan, Paul <Logan.Paul@epa.gov>
Sent: Thursday, July 16, 2020 6:15 PM
To: Robinson, Valois <Robinson.Valois@epa.gov>; Denawa, Mai <Denawa.Mai@epa.gov>
Cc: Chin, Lucita <Chin.Lucita@epa.gov>
Subject: RE: gw impacts cea

Ex. 5 AC/DP

Please let me know if you have any questions.

Paul Logan
Senior Assistant Regional Counsel | EPA Region 8, Office of Regional Counsel
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From: Logan, Paul <Logan.Paul@epa.gov>
Sent: Wednesday, July 15, 2020 6:09 PM
To: Robinson, Valois <Robinson.Valois@epa.gov>; Denawa, Mai <Denawa.Mai@epa.gov>
Cc: Chin, Lucita <Chin.Lucita@epa.gov>
Subject: RE: gw impacts cea

Sorry I'm behind on this email thread; I'll be in touch tomorrow.

Paul Logan
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From: Robinson, Valois <Robinson.Valois@epa.gov>
Sent: Wednesday, July 15, 2020 7:42 AM
To: Denawa, Mai <Denawa.Mai@epa.gov>; Logan, Paul <Logan.Paul@epa.gov>
Cc: Chin, Lucita <Chin.Lucita@epa.gov>
Subject: RE: gw impacts cea

Hi Mai,

Ex. 5 AC/DP

Paul is there anything else to add to this topic that I forgot?
Thanks!

Valois

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From: Denawa, Mai <Denawa.Mai@epa.gov>
Sent: Tuesday, July 14, 2020 1:10 PM
To: Logan, Paul <Logan.Paul@epa.gov>; Robinson, Valois <Robinson.Valois@epa.gov>
Cc: Chin, Lucita <Chin.Lucita@epa.gov>
Subject: gw impacts cea

Ex. 5 AC/DP

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3.3.1 Potential Impacts to Ore Zone Groundwater Quality

A potential but short-term environmental impact to Inyan Kara groundwater as a result of ISR is the degradation of water quality in the ore zone within the wellfield areas. The interaction of the lixiviant with the mineral and chemical constituents of the aquifer will result in an increase in trace elements and salinity during uranium recovery operations. Powertech has requested an aquifer exemption to allow for the injection of lixiviant through the Class III injection wells into the uranium ore deposits. The EPA is proposing approval of the aquifer exemption for all wellfields except for the area associated with wellfields 6 and 7 in the Burdock Area. The ISR wellfields and the proposed aquifer exemption boundary are shown in Figure 2. The EPA is proposing approval of the aquifer exemption for Burdock wellfields 6 and 7 after well 16, which is a former drinking water well completed in the proposed aquifer exemption area, is plugged and abandoned. For more information about the aquifer exemption, see the document entitled *U.S. EPA Region 8 Underground Injection Control Program Aquifer Exemption Record of Decision*, which is a part of the Administrative Record for these UIC permitting actions. Impacts to the Inyan Kara aquifers are authorized only within approved aquifer exemption areas.

The NRC license requires Powertech to conduct groundwater restoration to the wellfield injection zone to restore the groundwater to meet 10 CFR Part 40, Appendix A, Criterion 5B(5) requirements. During groundwater restoration, Powertech will restore groundwater quality in the injection zone where uranium recovery occurred consistent with NRC license requirements described in Section 6.1.3 of the NRC Safety Evaluation Report and Section 2.1.1.1.4 of the SEIS. The NRC requirements will assure that the post-restoration groundwater concentrations do not pose a hazard to human health and the environment. During groundwater restoration, Powertech will monitor groundwater using standard industry practices to determine the progression and effectiveness of restoration. Therefore, the EPA concludes that impacts to ore zone water quality after completion of groundwater restoration should be minimal. In addition, the Class III Area Permit requires the Permittee to develop a Wellfield Closure Plan that is based on a Conceptual Site Model and geochemical modeling. The purpose of the geochemical modeling is to evaluate the potential for ISR contaminants to cross the aquifer exemption boundary into the surrounding USDWs. The Class III Area Permit includes requirements to calibrate the geochemical model for each wellfield based on site-specific sampling and analysis of the geochemical and water quality information acquired according to the specifications in the Conceptual Site Model. The Conceptual Site Model includes monitoring requirements that are tied to the timing of groundwater restoration and restoration stabilization monitoring phases. The Wellfield Closure Plan shall demonstrate that the wellfield closure, including plugging and abandonments of all wellfield injection and production wells, will result in adequate protection of USDWs as required under 40 CFR § 146.10(a)(4). The EPA will determine whether the Wellfield Closure Plan provides adequate protection based on site specific information, such as the nature and concentration of any residuals, the hydrogeology of

the aquifer, the economic and technical feasibility of cleanup actions, the proximity of water wells, and the number of people relying on the USDW down-gradient from the mining site. If the Closure Plan does not demonstrate adequate protection of USDWs, the Director shall prescribe aquifer cleanup and monitoring where he deems it necessary and feasible to insure adequate protection of USDWs to fulfill the requirements under 40 CFR § 146.10(a)(4).

Mai Denawa

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